

R. Swartz

PAGE: 1

1641

#6
MB
06/09/00

RAW SEQUENCE LISTING
PATENT APPLICATION US/09/461,774

DATE: 05/19/2000
TIME: 18:58:25

Input Set: I461774.RAW

This Raw Listing contains the General Information
Section and up to first 5 pages.

ENTERED

1 <110> APPLICANT: CHAN, Lily
2 CHUNG, Maxey Ching Ming
3 LIM, Renee Lay Hong
4 <120> TITLE OF INVENTION: Bacterial-derived molecules and therapeutic and
5 diagnostic uses therefor
6 <130> FILE REFERENCE: 1781-0180P
7 <140> CURRENT APPLICATION NUMBER: US/09/461,774
8 <141> CURRENT FILING DATE: 1999-12-15
9 <160> NUMBER OF SEQ ID NOS: 22
10 <170> SOFTWARE: PatentIn Ver. 2.1
11 <210> SEQ ID NO 1
12 <211> LENGTH: 1617
13 <212> TYPE: DNA
14 <213> ORGANISM: Mycobacterium tuberculosis
15 <220> FEATURE:
16 <221> NAME/KEY: CDS
17 <222> LOCATION: (1)..(1617) : 500
18 <220> FEATURE:
19 <221> NAME/KEY: mat_peptide
20 <222> LOCATION: (1)..(1617)
21 <400> SEQUENCE: 1
22 agc aag ctg atc gaa tac gac gaa acc gcg cgt cgc gcc atg gag gtc 48
23 Ser Lys Leu Ile Glu Tyr Asp Glu Thr Ala Arg Arg Ala Met Glu Val
24 1 5 10 15
25 ggc atg gac aag ctg gcc gac acc gtg cgg gtg acg ctg ggg ccg cgc 96
26 Gly Met Asp Lys Leu Ala Asp Thr Val Arg Val Thr Leu Gly Pro Arg
27 20 25 30
28 ggc cgg cat gtg gtg ctg gcc aag gcg ttt ggc gga ccc acg gtt acc 144
29 Gly Arg His Val Val Leu Ala Lys Ala Phe Gly Gly Pro Thr Val Thr
30 35 40 45
31 aac gac ggc gtc acg gtg gca cgt gag atc gag ctg gaa gat ccg ttt 192
32 Asn Asp Gly Val Thr Val Ala Arg Glu Ile Glu Leu Glu Asp Pro Phe
33 50 55 60
34 gaa gac ttg ggc gcc cag ctg gtg aag tcg gtg gcc acc aag acc aac 240
35 Glu Asp Leu Gly Ala Gln Leu Val Lys Ser Val Ala Thr Lys Thr Asn
36 65 70 75 80
37 gat gtt gcc ggt gac ggc acc acc acc gca acc atc ttg gcg cag gca 288
38 Asp Val Ala Gly Asp Gly Thr Thr Ala Thr Ile Leu Ala Gln Ala
39 85 90 95
40 ctg atc aag ggc ggc ctg agg cta gtg gcc ggc gtc aac ccg gtc 336
41 Leu Ile Lys Gly Gly Leu Arg Leu Val Ala Ala Gly Val Asn Pro Val
42 100 105 110
43 gcg ctc ggc gtg gga atc ggc aag gcc gac ggc gta ttc gag gcg 384
44 Ala Leu Gly Val Gly Ile Gly Lys Ala Ala Asp Ala Val Phe Glu Ala

RECEIVED
JUN 08 2000

PAGE: 2

RAW SEQUENCE LISTING
PATENT APPLICATION US/09/461,774

 DATE: 05/19/2000
 TIME: 18:58:25

Input Set: I461774.RAW

45	115	120	125	
46	ctg ctg gca tcg gcc acg ccg gtg tcc ggc aag acc ggc atc gcg cag			432
47	Leu Leu Ala Ser Ala Thr Pro Val Ser Gly Lys Thr Gly Ile Ala Gln			
48	130	135	140	
49	gtg gcg acg gtg tcc tcg cgc gac gag cag atc ggt gac ctg gtt ggc			480
50	Val Ala Thr Val Ser Ser Arg Asp Glu Gln Ile Gly Asp Leu Val Gly			
51	145	150	155	160
52	gaa gcg atg aac aag gtc ggc cac gac agc gtg gtc agc gtc aag gaa			528
53	Glu Ala Met Asn Lys Val Gly His Asp Ser Val Val Ser Val Lys Glu			
54	165	170	175	
55	tcc tcc acg ctg ggc acc gag ttg gag ttc acc gaa ggt att ggc ttc			576
56	Ser Ser Thr Leu Gly Thr Glu Leu Glu Phe Thr Glu Gly Ile Gly Phe			
57	180	185	190	
58	cac aaa ggc ttc ttg tcg gca tac ttc gtt acc gac ttc gat aac cag			624
59	His Lys Gly Phe Leu Ser Ala Tyr Phe Val Thr Asp Phe Asp Asn Gln			
60	195	200	205	
61	cag gcg gtg ctc gag gac gcg ttg atc ctg cta cac caa gac aag atc			672
62	Gln Ala Val Leu Glu Asp Ala Leu Ile Leu His Gln Asp Lys Ile			
63	210	215	220	
64	agc tcg ctt ccc gat ctg ttg cca ttg ctg gaa aag gtt gca gga acg			720
65	Ser Ser Leu Pro Asp Leu Leu Pro Leu Leu Glu Lys Val Ala Gly Thr			
66	225	230	235	240
67	ggt aag cca cta ctg atc gtg gct gaa gac gtg gag ggc gaa gcg ttg			768
68	Gly Lys Pro Leu Leu Ile Val Ala Glu Asp Val Glu Gly Glu Ala Leu			
69	245	250	255	
70	gcg acg ctg gtc gtc aac gcg att cgc aag acg ttg aaa gcg gtc gcg			816
71	Ala Thr Leu Val Val Asn Ala Ile Arg Lys Thr Leu Lys Ala Val Ala			
72	260	265	270	
73	gtc aag ggg ccg tac ttc ggt gac cgc cgt aag gcg ttc ctt gag gac			864
74	Val Lys Gly Pro Tyr Phe Gly Asp Arg Arg Lys Ala Phe Leu Glu Asp			
75	275	280	285	
76	ctg gcg gtg acg ggt ggc cac gtg gtc aac ccc gac gcc ggc att			912
77	Leu Ala Val Val Thr Gly Gly His Val Val Asn Pro Asp Ala Gly Ile			
78	290	295	300	
79	gtg ctg cgc gag gtg ggc ttg gag gtg ctg ggc tcg gcc cga cgc gtg			960
80	Val Leu Arg Glu Val Gly Leu Glu Val Leu Gly Ser Ala Arg Arg Val			
81	305	310	315	320
82	gtg gtc agc aag gac gac acg gtc att gtc gac ggc ggc ggc acc gca			1008
83	Val Val Ser Lys Asp Asp Thr Val Ile Val Asp Gly Gly Thr Ala			
84	325	330	335	
85	gaa gcg gtg gcc aac cgg gcg aac cac ttg cgt gcc gag atc gac aag			1056
86	Glu Ala Val Ala Asn Arg Ala Asn His Leu Arg Ala Glu Ile Asp Lys			
87	340	345	350	
88	agc gat tcg gat tgg gat cgg gaa aag ctt ggc gag cgg ctg gcc aaa			1104
89	Ser Asp Ser Asp Trp Asp Arg Glu Lys Leu Gly Glu Arg Leu Ala Lys			
90	355	360	365	
91	ctg gcc ggc ggg gtt gct gtc atc aag gtg ggt gcc gcc acc gac acc			1152
92	Leu Ala Gly Gly Val Ala Val Ile Lys Val Gly Ala Ala Thr Asp Thr			
93	370	375	380	
94	gca ctc aag gag cgc aag gaa agc gtc gag gat gcg gtc gcg gcc gcc			1200

PAGE: 3

RAW SEQUENCE LISTING
PATENT APPLICATION US/09/461,774

 DATE: 05/19/2000
 TIME: 18:58:25

Input Set: I461774.RAW

95	Ala Leu Lys Glu Arg Lys Glu Ser Val Glu Asp Ala Val Ala Ala Ala	
96	385 390 395 400	
97	aag gcc gcg gtc gag gag ggc atc gtc cct ggt ggg gga gcc tcg ctc	1248
98	Lys Ala Ala Val Glu Glu Gly Ile Val Pro Gly Gly Ala Ser Leu	
99	405 410 415	
100	atc cac cag gcc cgcc aag gcg ctg acc gaa ctg cgt gcg tcg ctg acc	1296
101	Ile His Gln Ala Arg Lys Ala Leu Thr Glu Leu Arg Ala Ser Leu Thr	
102	420 425 430	
103	ggt gac gag gtc ctc ggt gtc gac gtg ttc tcc gaa gcc ctt gcc gcg	1344
104	Gly Asp Glu Val Leu Gly Val Asp Val Phe Ser Glu Ala Leu Ala Ala	
105	435 440 445	
106	ccg ttg ttc tgg atc gcc gcc aac gct ggc ttg gac ggc tcg gtg gtg	1392
107	Pro Leu Phe Trp Ile Ala Ala Asn Ala Gly Leu Asp Gly Ser Val Val	
108	450 455 460	
109	gtc aac aag gtc agc gag cta ccc gcc ggg cat ggg ctg aac gtg aac	1440
110	Val Asn Lys Val Ser Glu Leu Pro Ala Gly His Gly Leu Asn Val Asn	
111	465 470 475 480	
112	acc ctg agc tat ggt gac ttg gcc gct gac ggc gtc atc gac ccg gtc	1488
113	Thr Leu Ser Tyr Gly Asp Leu Ala Ala Asp Gly Val Ile Asp Pro Val	
114	485 490 495	
115	aag gtg act agg tcg gcg gtg ttg aac gcg tca tcg gtt gcc cgg atg	1536
116	Lys Val Thr Arg Ser Ala Val Leu Asn Ala Ser Ser Val Ala Arg Met	
117	500 505 510	
118	gta ctc acc acc gag acg gtc gtg gtc gac aag ccg gcc aag gca gaa	1584
119	Val Leu Thr Thr Glu Thr Val Val Val Asp Lys Pro Ala Lys Ala Glu	
120	515 520 525	
121	gat cac gac cat cac cac ggg cac gcg cac tga	
122	Asp His Asp His His His Gly His Ala His	
123	530 535	
124	<210> SEQ ID NO 2	
125	<211> LENGTH: 538	
126	<212> TYPE: PRT	
127	<213> ORGANISM: Mycobacterium tuberculosis	
128	<400> SEQUENCE: 2	
129	Ser Lys Leu Ile Glu Tyr Asp Glu Thr Ala Arg Arg Ala Met Glu Val	
130	1 5 10 15	
131	Gly Met Asp Lys Leu Ala Asp Thr Val Arg Val Thr Leu Gly Pro Arg	
132	20 25 30	
133	Gly Arg His Val Val Leu Ala Lys Ala Phe Gly Gly Pro Thr Val Thr	
134	35 40 45	
135	Asn Asp Gly Val Thr Val Ala Arg Glu Ile Glu Leu Glu Asp Pro Phe	
136	50 55 60	
137	Glu Asp Leu Gly Ala Gln Leu Val Lys Ser Val Ala Thr Lys Thr Asn	
138	65 70 75 80	
139	Asp Val Ala Gly Asp Gly Thr Thr Ala Thr Ile Leu Ala Gln Ala	
140	85 90 95	
141	Leu Ile Lys Gly Gly Leu Arg Leu Val Ala Ala Gly Val Asn Pro Val	
142	100 105 110	
143	Ala Leu Gly Val Gly Ile Gly Lys Ala Ala Asp Ala Val Phe Glu Ala	
144	115 120 125	

RECEIVED
JUN 08 2000
TECH CENTER 1600/2500

PAGE: 4

RAW SEQUENCE LISTING
PATENT APPLICATION US/09/461,774

 DATE: 05/19/2000
 TIME: 18:58:25

Input Set: I461774.RAW

145 Leu Leu Ala Ser Ala Thr Pro Val Ser Gly Lys Thr Gly Ile Ala Gln
 146 130 135 140
 147 Val Ala Thr Val Ser Ser Arg Asp Glu Gln Ile Gly Asp Leu Val Gly
 148 145 150 155 160
 149 Glu Ala Met Asn Lys Val Gly His Asp Ser Val Val Ser Val Lys Glu
 150 165 170 175
 151 Ser Ser Thr Leu Gly Thr Glu Leu Glu Phe Thr Glu Gly Ile Gly Phe
 152 180 185 190
 153 His Lys Gly Phe Leu Ser Ala Tyr Phe Val Thr Asp Phe Asp Asn Gln
 154 195 200 205
 155 Gln Ala Val Leu Glu Asp Ala Leu Ile Leu His Gln Asp Lys Ile
 156 210 215 220
 157 Ser Ser Leu Pro Asp Leu Leu Pro Leu Leu Glu Lys Val Ala Gly Thr
 158 225 230 235 240
 159 Gly Lys Pro Leu Leu Ile Val Ala Glu Asp Val Glu Gly Glu Ala Leu
 160 245 250 255
 161 Ala Thr Leu Val Val Asn Ala Ile Arg Lys Thr Leu Lys Ala Val Ala
 162 260 265 270
 163 Val Lys Gly Pro Tyr Phe Gly Asp Arg Arg Lys Ala Phe Leu Glu Asp
 164 275 280 285
 165 Leu Ala Val Val Thr Gly Gly His Val Val Asn Pro Asp Ala Gly Ile
 166 290 295 300
 167 Val Leu Arg Glu Val Gly Leu Glu Val Leu Gly Ser Ala Arg Arg Val
 168 305 310 315 320
 169 Val Val Ser Lys Asp Asp Thr Val Ile Val Asp Gly Gly Thr Ala
 170 325 330 335
 171 Glu Ala Val Ala Asn Arg Ala Asn His Leu Arg Ala Glu Ile Asp Lys
 172 340 345 350
 173 Ser Asp Ser Asp Trp Asp Arg Glu Lys Leu Gly Glu Arg Leu Ala Lys
 174 355 360 365
 175 Leu Ala Gly Gly Val Ala Val Ile Lys Val Gly Ala Ala Thr Asp Thr
 176 370 375 380
 177 Ala Leu Lys Glu Arg Lys Glu Ser Val Glu Asp Ala Val Ala Ala
 178 385 390 395 400
 179 Lys Ala Ala Val Glu Glu Gly Ile Val Pro Gly Gly Ala Ser Leu
 180 405 410 415
 181 Ile His Gln Ala Arg Lys Ala Leu Thr Glu Leu Arg Ala Ser Leu Thr
 182 420 425 430
 183 Gly Asp Glu Val Leu Gly Val Asp Val Phe Ser Glu Ala Leu Ala Ala
 184 435 440 445
 185 Pro Leu Phe Trp Ile Ala Ala Asn Ala Gly Leu Asp Gly Ser Val Val
 186 450 455 460
 187 Val Asn Lys Val Ser Glu Leu Pro Ala Gly His Gly Leu Asn Val Asn
 188 465 470 475 480
 189 Thr Leu Ser Tyr Gly Asp Leu Ala Ala Asp Gly Val Ile Asp Pro Val
 190 485 490 495
 191 Lys Val Thr Arg Ser Ala Val Leu Asn Ala Ser Ser Val Ala Arg Met
 192 500 505 510
 193 Val Leu Thr Thr Glu Thr Val Val Val Asp Lys Pro Ala Lys Ala Glu
 194 515 520 525

PAGE: 5

RAW SEQUENCE LISTING
PATENT APPLICATION US/09/461,774

 DATE: 05/19/2000
 TIME: 18:58:25

Input Set: I461774.RAW

195 Asp His Asp His His Gly His Ala His
 196 530 535
 197 <210> SEQ ID NO 3
 198 <211> LENGTH: 1560
 199 <212> TYPE: DNA
 200 <213> ORGANISM: Mycobacterium tuberculosis
 201 <220> FEATURE:
 202 <221> NAME/KEY: CDS
 203 <222> LOCATION: (1)..(1560)
 204 <220> FEATURE:
 205 <221> NAME/KEY: mat_peptide
 206 <222> LOCATION: (1)..(1560)
 207 <400> SEQUENCE: 3
 208 gcg gcc atg tgg cgc cgc aga ccg ttg agc tcg gcg ctg ctg tcc ttc 48
 209 Ala Ala Met Trp Arg Arg Arg Pro Leu Ser Ser Ala Leu Leu Ser Phe
 210 1 5 10 15
 211 ggg ttg ctg ctc ggc gga ctg ctc cta gca gcg ccc ccg ttg gcc ggc 96
 212 Gly Leu Leu Leu Gly Gly Leu Leu Ala Ala Pro Pro Leu Ala Gly
 213 20 25 30
 214 gcg act gaa gaa ccc ggc ggc ggc caa acc ccg ggt gcg ccg gtc gtg 144
 215 Ala Thr Glu Glu Pro Gly Ala Gly Gln Thr Pro Gly Ala Pro Val Val
 216 35 40 45
 217 gcg ccg caa cag agt tgg aac agc tgc cgc gag ttc atc gcc gac acc 192
 218 Ala Pro Gln Gln Ser Trp Asn Ser Cys Arg Glu Phe Ile Ala Asp Thr
 219 50 55 60
 220 agc gaa att cgc act gca cgc tgc gcg acg gtg tcc gtc ccc gtc gac 240
 221 Ser Glu Ile Arg Thr Ala Arg Cys Ala Thr Val Ser Val Pro Val Asp
 222 65 70 75 80
 223 tac gac caa ccc ggt ggg aca caa gcg aag ttg gcg gtg atc cgc gtc 288
 224 Tyr Asp Gln Pro Gly Thr Gln Ala Lys Leu Ala Val Ile Arg Val
 225 85 90 95
 226 ccc gcg acg gga cag cga ttc gga gca ctg ctg gtc aat cct ggg gga 336
 227 Pro Ala Thr Gly Gln Arg Phe Gly Ala Leu Leu Val Asn Pro Gly Gly
 228 100 105 110
 229 ccc ggg gcg tcg gcg gtc gac atg gtc gcc gct atg gca ccc gcg atc 384
 230 Pro Gly Ala Ser Ala Val Asp Met Val Ala Ala Met Ala Pro Ala Ile
 231 115 120 125
 232 gcc gac acc gac att ctc cgc cac ttc gac ctg gtg ggc ttc gac ccg 432
 233 Ala Asp Thr Asp Ile Leu Arg His Phe Asp Leu Val Gly Phe Asp Pro
 234 130 135 140
 235 aga ggg gtc ggc cac tcg acc cct gcg ttg cgg tgt cgc acc gac gcc 480
 236 Arg Gly Val Gly His Ser Thr Pro Ala Leu Arg Cys Arg Thr Asp Ala
 237 145 150 155 160
 238 gag ttc gac gcg tac cgg cgc gat ccg atg gcc gac tac agt ccg gcc 528
 239 Glu Phe Asp Ala Tyr Arg Arg Asp Pro Met Ala Asp Tyr Ser Pro Ala
 240 165 170 175
 241 ggc gtc acc cac gtc gaa cag gtc tac cgg cag ttg gcc cag gac tgt 576
 242 Gly Val Thr His Val Glu Gln Val Tyr Arg Gln Leu Ala Gln Asp Cys
 243 180 185 190
 244 gtt gac cgg atg ggc ttc agc ttc ttg gcc aat atc ggt acc gcg tcc 624

PAGE: 6

VERIFICATION SUMMARY
PATENT APPLICATION US/09/461,774

DATE: 05/19/2000
TIME: 18:58:25

Input Set: I461774.RAW

Line ? Error/Warning

Original Text

306 W Invalid/Missing Amino Acid Numbering 515 520